



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

AS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/108,232 07/01/98 COLEMAN

G 97-674

IM22/0105

EXAMINER

JOHNSON, J

ROBERT J HAMPSCH
CATERPILLAR INC
PATENT DEPARTMENT AB6490
100 N E ADAMS STREET
PEORIA IL 61629-6490

ART UNIT

PAPER NUMBER

1721

DATE MAILED:

01/05/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/108,232

Applicant(s)

Coleman et al.

Examiner

J. Johnson

Group Art Unit

1721

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☒ Responsive to communication(s) filed on 10/12/99

☒ This action is **FINAL**.

- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 111; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-22 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-22 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

Art Unit: 1721

The use of trademarks have been noted in this application. Trademarks should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin.

Dubin, U.S. Patent 5,284,492, teaches an enhanced lubricity water and fuel oil emulsion (column 3, lines 31-37). The emulsion can be either a water in fuel oil or a fuel oil in water emulsion (column 3, lines 41-44). The oil phase comprises a light fuel oil, by which is meant a fuel oil having little or no aromatic compounds and consists essentially of relatively low molecular weight aliphatic and naphthenic hydrocarbons (column 3, lines 45-49). Such fuels include fuels conventionally known as, *inter alia*, diesel fuel (column 3, lines 61-68). The emulsions advantageously comprise water-in-fuel oil emulsions having up to about 90% water by weight. The emulsions which have the most practical significance in applications when combusted alone are those having about 5% to about 50% water and are preferably about 10% to about 35% water-in-fuel oil by weight (column 4, lines 7-15). Although demineralized water is not required,

Art Unit: 1721

the use of demineralized water in the emulsion is preferred (column 4, lines 30-35). The emulsions are prepared such that the discontinuous phase preferably has a particle size wherein at least about 70% of the droplets are below about 5 microns Sauter mean diameter. More preferably, at least about 85%, and most preferably at least about 90% of the droplets are below about 5 microns Sauter mean diameter (column 4, lines 38-44). An emulsification system is most preferably employed to maintain the emulsion. A desirable emulsification system comprises about 25% to about 85% by weight of an amide, especially an alkanolamide or n-substituted alkyl amine; about 5% to about 25% by weight of a phenolic surfactant; and about 0% to about 40% by weight of a difunctional block polymer terminating in a primary hydroxyl group (column 5, lines 2+). The addition of a component selected from the group consisting of dimer and/or trimer acids, sulfurized castor oil, phosphate esters, and mixtures thereof significantly increase the lubricity of the emulsion (column 7, lines 15+). The addition of a corrosion inhibitor is taught in column 8, lines 56 to column 9, line 2.

While Dubin differs from the instant claims in not disclosing the claimed method of forming the emulsion, the patentability of a product does not depend on its method of production, *In re Thorpe*, 227 USPQ at 966.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1721

Claims 10, 12, 15 and 16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support in the specification as filed for the now claimed limitation of a non-ionic polymeric dispersant (claims 12 and 16).

There is no support in the specification as filed for the now claimed "EO/PO block copolymer having approximately between 20 weight percent ethylene oxide (EO) and an approximate molecular weight of the propylene [sic] oxide (PO) block of about 1700" (claims 10 and 15).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-22 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-19 of copending Application No. 09/109,028. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

Art Unit: 1721

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: fuel emulsion composition for an internal combustion engine comprising purified water; hydrocarbon petroleum distillate fuel as the continuous phase of the emulsion; and a surfactant package comprising surfactant, block copolymer, and polymeric dispersant.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Applicant's arguments filed October 13, 1999 have been fully considered but they are not persuasive.

Applicants argue that

the Examiner has improperly characterized the primary reference and has completely ignored the process limitations included in the present claims. The differences between the present invention, as claimed, and the primary reference includes: the fuel application, the water, the content and general proportions of the surfactant package, the general proportions of primary surfactant; the general proportions of the polymeric dispersant and block co-polymer; as well as the fuel droplet size of the fuel emulsion.

For example, various claims of the present invention recite about 0.3 to 1.0 percent of a surfactant package whereas Dubin teaches 0.5 to 5.0 weight percent of an emulsification system. In addition, various claims of the present invention claims about 4000 to 6000 ppm (0.4-0.6%) percent of a primary surfactant and 100-5000 ppm (0.1-0.5%) of a block co-polymer whereas the Dubin reference teaches 0.125-4.25 weight

Art Unit: 1721

percent of primary surfactant and 0.167 - 2.0% of a block co-polymer. While there may be some overlap in the specified ranges, the teaches associated with each limitation and with the subject matter as a whole, when properly construed, represent patentable difference between the present claims and the Dubin teachings. (Remarks, pages 5 and 6).

Applicants' arguments lack merit.

As previously noted, the patentability of a product does not depend on its method of production, *In re Thorpe*, 227 USPQ at 966. Nor does the recitation of an intended use, e.g. "for a reciprocating engine", impart patentability to an otherwise old composition. As to the admitted "overlap" between the claimed ranges and the teachings of Dubin, those overlapping ranges would have at least rendered the claimed ranges obvious to one having ordinary skill in the art.

Applicants argue

[w]ith regard to the droplet size difference, does the Examiner take the position that 70% of the droplets are below about 5 microns as recited in Dubin is the same as an average droplet size of about 1 micron or less? Applicants maintain these two statements are different. In fact, just the different droplet size distributions represent a patentable difference, alone or in combination with the numerous other differences. (Remarks, pages 6 and 7).

Applicants' arguments lack merit.

Dubin teaches in column 4, lines 41-44, that

[m]ore preferably, at least about 85%, and most preferably at least about 90%, of the droplets are below about 5 microns Sauter mean diameter for emulsion stability.

Initially it is noted that the majority of applicants' claims are not limited to any specific droplet size. Composition wherein at least about 90% of the droplets have a diameter below 5 microns as taught by Dubin would encompass compositions wherein the average droplet size is

Art Unit: 1721

about 1 micron or less. Accordingly, absent evidence of unexpected results, the claimed droplet size would have been obvious to one having ordinary skill in the art at the time the invention was made.

Applicants argue

[o]ther important differences include the water purity and the fuel application, just to name a few. In light of these differences, is the Examiner alleging that demineralized water is the same as purified water?; or that a reciprocating engine is the same as a gas turbine? If so, Applicants kindly request an affidavit from the Examiner on these points or other document which suggests that demineralized water and purified water are the same and/or that a reciprocating engine is equivalent to a gas turbine, or that such differences are immaterial to the invention, (a statement that applicants would refute). (Remarks, page 7).

Applicants arguments lack merit.

Applicants' specification does not define the characteristics of "purified water" or limit it to any specific composition. The common accepted meaning of "purify" is to free from undesirable elements. Accordingly, demineralized water is, in fact, "purified water", i.e., water which has been freed from undesirable elements.

Applicants indicate a timely filed terminal disclaimer will be submitted upon the indication of allowable subject matter in the present claims or upon the issuing of patent claims in the co-pending application 09/109,028. Applicants further state

[b]e advised however, that the filing dates of both the present Application as well as co-pending Application No. 09/109,028 are identical (July 1, 1998) and therefore there is no patent term to disclaim (Remarks, page 8).

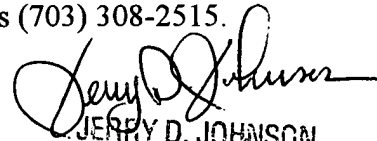
Art Unit: 1721

As applicants are no doubt aware, a terminal disclaimer is still required in order to insure common ownership between any patent granted on this application and the 09/109,028 application.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry D. Johnson whose telephone number is (703) 308-2515.


JERRY D. JOHNSON
PRIMARY EXAMINER
GRCU? 1100

JDJ
December 28, 1999